

# PARALLEL DECISION-FEEDBACK DECODER AND METHOD FOR JOINT EQUALIZING AND DECODING OF INCOMING DATA STREAM

## Abstract

A P-tap parallel decision-feedback decoder (PDFD) is also disclosed. The PDFD includes a plurality of state shift registers. For each state of a code utilized by an incoming data stream, a survivor metric for a state is shifted into the first shift register for the state. Each first shift register has M cells. A decision device is coupled to the first shift registers for outputting a first survivor metric according to survivor metrics in the first shift registers. A second shift register has N delay cells, and the first survivor metric is shifted into the second shift register.